

AMENDMENTS TO THE CLAIMS

Please cancel claims 3 and 13 without prejudice.

Please amend claims 1 and 11 as shown below.

hjy

1. **(Currently Amended)** A monoclonal antibody that specifically binds to an isolated A-type substance obtainable from human liver or placenta, wherein the substance is a cyclitol-containing carbohydrate comprising a Zn²⁺ ion and has a ~~the~~ biological activity of regulating lipogenic activity and inhibiting cAMP dependent protein kinase.

2. **(Original)** The monoclonal antibody of claim 1 wherein the substance comprises phosphate.

~~3.~~ **(Canceled)**

4. **(Original)** A pharmaceutical composition comprising the monoclonal antibody of claim 1 in combination with a pharmaceutically acceptable carrier.

5. **(Original)** The monoclonal antibody of claim 1, wherein the monoclonal antibody is an antagonist having the property of:

- a) inhibiting the release of the A-type substance;
- b) binding to the A-type substance and thereby reducing its level; and/or
- c) reducing a biological activity of the A-type substance.

6. **(Original)** The monoclonal antibody of claim 1, wherein the monoclonal antibody is linked, directly or indirectly, to a label.

7. **(Original)** The monoclonal antibody of claim 1, wherein the monoclonal antibody is immobilized on a solid phase.

8. **(Original)** An immunoassay method comprising:

- a) contacting a biological sample with the monoclonal antibody of claim 1 under suitable conditions for specific binding of the monoclonal antibody to A-type substance present in the sample, if any; and
- b) determining whether the monoclonal antibody binds specifically to the sample.

9. **(Original)** The immunoassay method of claim 8, additionally comprising measuring the amount of specific binding as an indication of the concentration of the A-type substance in the sample.

10. **(Original)** The immunoassay method of claim 9, additionally comprising determining the concentration of one or more P-type inositolphosphoglycans (IPGs) and then determining the ratio of the concentration of P-type IPG(s) to the concentration of the A-type substance determined in the immunoassay method.

11. **(Currently Amended)** A monoclonal antibody that specifically binds to an A-type cyclitol-containing carbohydrate substance comprising a Zn^{2+} ion, wherein the substance has a the biological activity of regulating lipogenic activity and inhibiting cAMP dependent protein kinase and:

- a) a molecular weight determined using negative mode MALDI mass spectroscopy as shown in Figures 13 and 14 tables 3 and 4, or a molecular weight related to one of the molecular weights set out in Figures 13 and 14 tables 3 and 4 by the addition or subtraction of one or more structure units of about 211 m/z; or,
- b) a molecular weight determined using positive mode MALDI mass spectroscopy as shown in Figure 15 table 5, or a molecular weight related to one of the molecular weights set out in Figure 15 table 5 by the addition or subtraction of one or more structure units of about 211 m/z.

12. **(Original)** The monoclonal antibody of claim 11 wherein the substance comprises phosphate.

13. **(Canceled)**

14. **(Original)** A pharmaceutical composition comprising the monoclonal antibody of claim 11 in combination with a pharmaceutically acceptable carrier.

15. **(Original)** The monoclonal antibody of claim 11, wherein the monoclonal antibody is an antagonist having the property of:

- a) inhibiting the release of the A-type substance;
- b) binding to the A-type substance and thereby reducing its level; and/or
- c) reducing a biological activity of the A-type substance

16. **(Original)** The monoclonal antibody of claim 11, wherein the monoclonal antibody is linked, directly or indirectly, to a label.

17. **(Original)** The monoclonal antibody of claim 11, wherein the monoclonal antibody is immobilized on a solid phase.

18. **(Original)** An immunoassay method comprising:

- a) contacting a biological sample with the monoclonal antibody of claim 11 under suitable conditions for specific binding of the monoclonal antibody to A-type substance present in the sample, if any; and
- b) determining whether the monoclonal antibody binds specifically to the sample.

19. **(Original)** The immunoassay method of claim 18, additionally comprising measuring the amount of specific binding as an indication of the concentration of the A-type substance in the sample.

20. **(Original)** The immunoassay method of claim 19, additionally comprising determining the concentration of one or more P-type inositolphosphoglycans (IPGs) and then

determining the ratio of the concentration of P-type IPG(s) to the concentration of the A-type substance determined in the immunoassay method.